Snake River Skies

The Monthly Newsletter of the Magic Valley Astronomical Society. July 2024

Membership Meeting
July 13th at the Herrett Center
CSI main campus at 7:00pm
It's the Pic-A-Nic

Centennial Observatory
See Inside for Details

Faulkner Planetarium
See Inside for Details

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Magic Valley Astronomical Society is a member of the Astronomical League

M-51 imaged by
Rick Widmer & Ken Thomason
Herrett Telescope - Shotwell Camera

Message from the Club Vice President

July Newsletter

Happy Summer everyone! First, a reminder our upcoming annual picnic July 13th at the Herrett Center. Cooking starts at 6pm. Again, we're asking all who attend to bring a side dish such as a salad or desert or chips. We will handle the ice cream. Then from the 5th-6th will be our Castle Rocks Star Party. Hope to see many of you there. While our crazy spring offered only a few clear and calm nights, July will hopefully offer better weather and a chance to catch some fun objects. One of the challenges I plan to take on will be imaging is on July 24th a Lunar Occultation pf Saturn (mag. 0.9), Another goal this month will be imaging star fields in our Great Milky Way galaxy. Hope to have some images to share and hope you all have a great and safe month. Our August speaker will Davis Olsen talking about Radio Telescopes.

Clear Skies
Dr. Jay Hartwell

Editor's Note:

Because of unforeseen circumstances this newsletter was delayed. My apologies, I hear Castle Rocks Star Party was a success. As I write this we are predicted to have above average temps on Saturday, the pic-a-nic. Please follow heat safety rules and hydrate accordingly.

Take care,
Editor

Visit our Website
www.mvastro.org

Moon Phases for July 2024

Twin Falls, Idaho, United States

July 2024

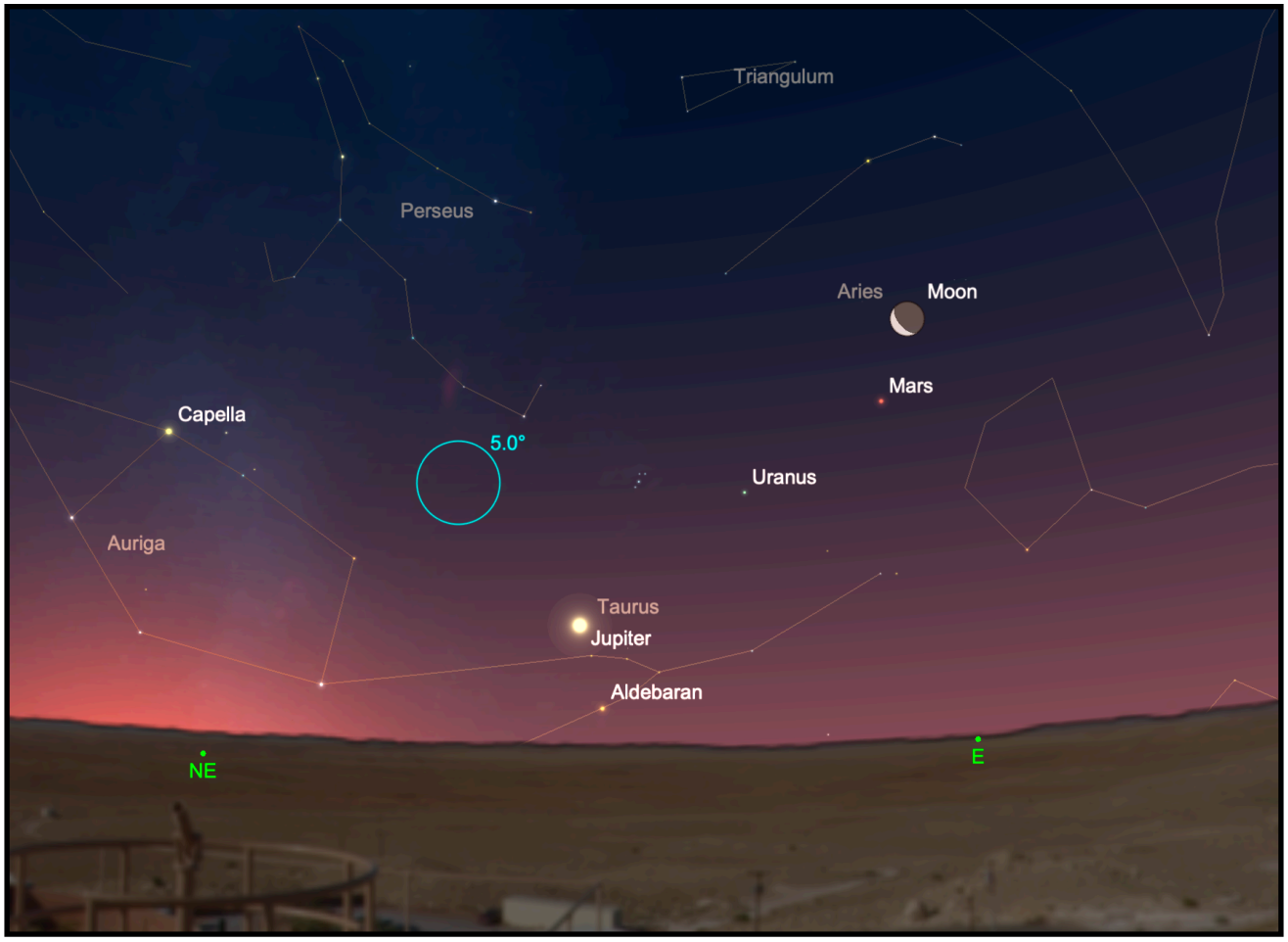
No.	Su	Mo	Tu	We	Th	Fr	Sa
27		1  17% Waning Crescent	2  9% Waning Crescent	3  4% Waning Crescent	4  1% Waning Crescent	5  New Moon 04:59 pm	6  1% Waxing Crescent
28	7  4% Waxing Crescent	8  9% Waxing Crescent	9  16% Waxing Crescent	10  23% Waxing Crescent	11  32% Waxing Crescent	12  41% Waxing Crescent	13  First Quarter 04:49 pm
29	14  60% Waxing Gibbous	15  69% Waxing Gibbous	16  78% Waxing Gibbous	17  86% Waxing Gibbous	18  92% Waxing Gibbous	19  97% Waxing Gibbous	20  99% Waxing Gibbous
30	21  Full Moon 04:19 am	22  96% Waning Gibbous	23  90% Waning Gibbous	24  82% Waning Gibbous	25  73% Waning Gibbous	26  62% Waning Gibbous	27  Last Quarter 08:54 pm
31	28  39% Waning Crescent	29  29% Waning Crescent	30  19% Waning Crescent	31  12% Waning Crescent			

https://www.mooninfo.org/world/united-states/100911/moon-calendar-july-2024-for-twin-falls.html | Moon Names: The Old Farmer's Almanac, May 2024

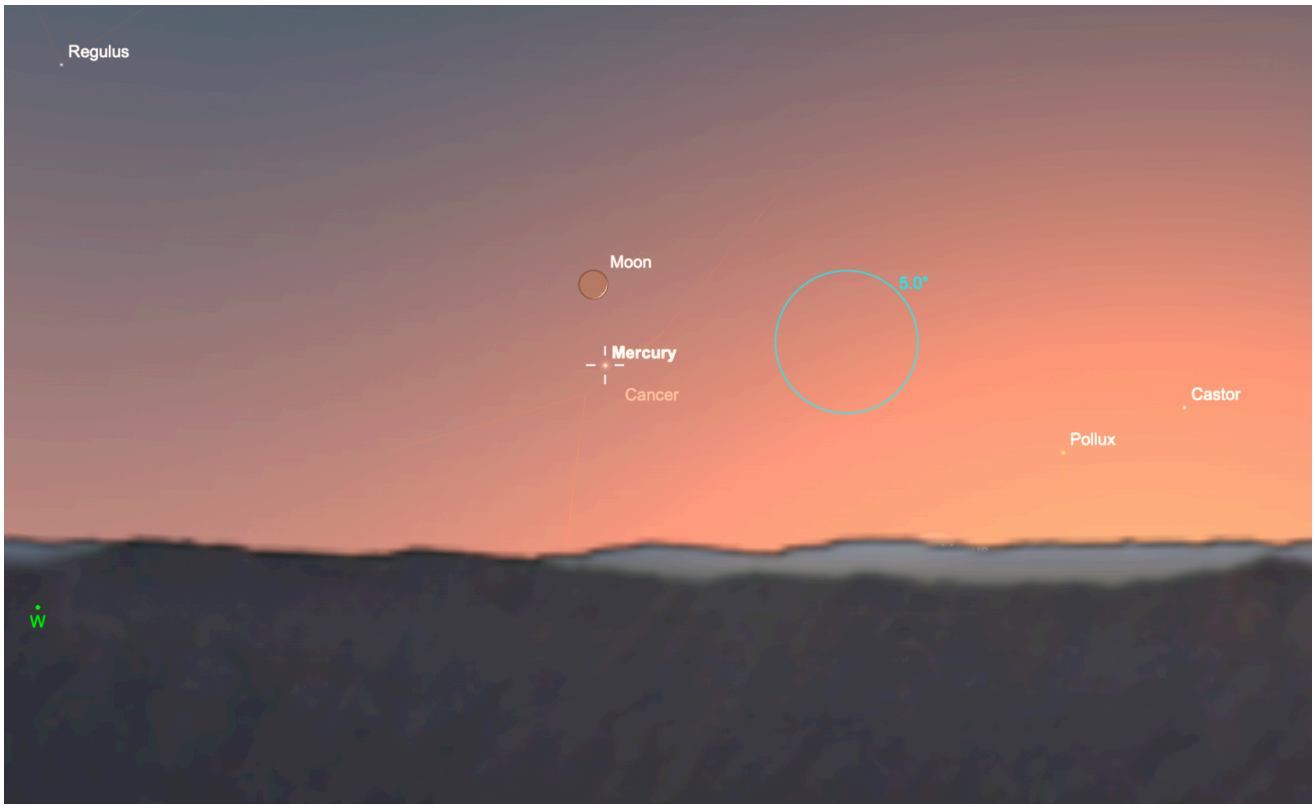
The full Moon in July is called the **Buck Moon** because the antlers of male deer (bucks) are in full-growth mode at this time. Bucks shed and regrow their antlers each year, producing a larger and more impressive set as the years go by. Several other names for this month's Moon also reference animals, including **Feather Moulting Moon** (Cree) and **Salmon Moon**, a Tlingit term indicating when fish returned to the area (Eeḵhéeni, Copper River) and were ready to be harvested.

The Sky This Month – July 2024

(Looking for last month's 'Night Sky'? Find it at this link…)
Northern summer and southern winter get underway as Jupiter, Mars, and Saturn continue their march upward into the early morning sky. The pair make a photogenic rendezvous with the Pleiades and Hyades at the beginning and end of the month. Mercury makes a good apparition in the evening sky, especially for southern-hemisphere skywatchers. The Moon occults a bright star while a meteor shower arrives during the latter half of the month. And don't forget about the Milky Way emerging in the darkening east-southeastern sky after sunset. Turn your optics along this spectacular river of stars to glimpse the many clusters, nebulae, and star clouds in our part of the galaxy. Here's what's in the night sky this month…

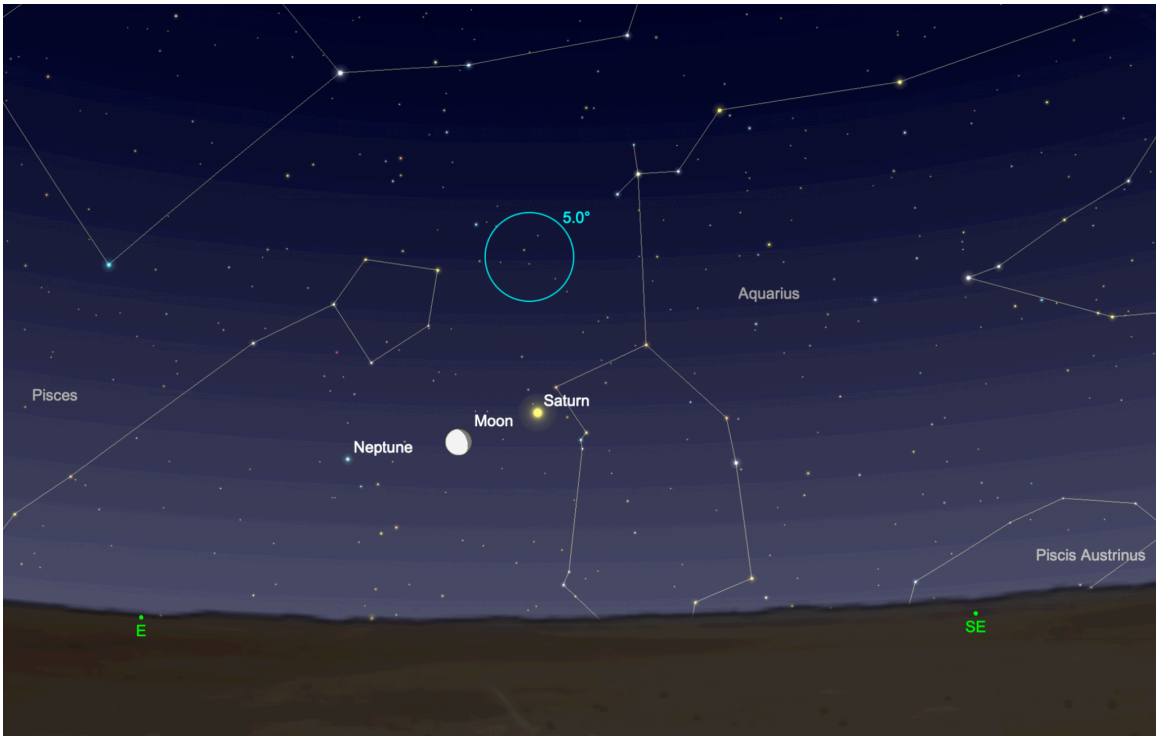


The waning crescent Moon, Mars, and Jupiter looking eastward on the morning of July 1, 2024. Image below. A wafer-thin crescent Moon and Mercury low in the western evening sky on July 7, 2024.



Most observers can see several double shadows and transits of Jupiter's four largest moons during the month. This little online tool from Sky & Telescope helps predict when you can see them.

13 July. First Quarter Moon, 22:49 UT
13-14 July. The first-quarter Moon occults the bright star Spica in the constellation Virgo for observers in most of North and Central America. The star disappears behind the darkened limb and reappears from behind the bright lunar limb. Timing and visibility for hundreds of locations is available at this link.
17 July. A fat gibbous Moon encroaches on the northern summer Milky Way over the next few nights. Tonight, it lies less than 4° from Antares, the red supergiant star at the heart of Scorpius.
21 July. Full Moon, 10:17 UT (the 'Full Buck Moon')
22 July. Mercury reaches its greatest eastern elongation about 27° from the Sun in the evening sky.



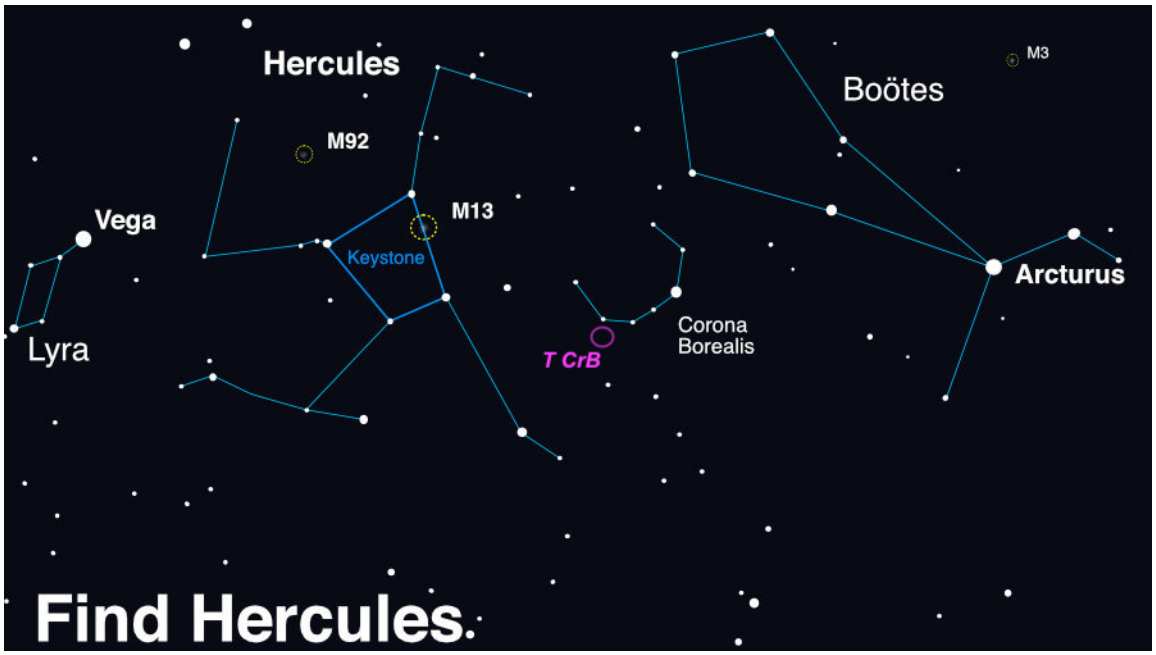
The Moon and Saturn rising in the east before midnight on July 24, 2024.

24 July. Look eastward an hour before midnight to see the waxing gibbous Moon and Saturn rising about 5° apart. From now through November, the planet is in its best position for telescopic observation. The rings are tilted at just 2° from edge-on which makes for interesting viewing.
28 July. Last Quarter Moon, 02:52 UT
28-31 July. The morning display of Mars and Jupiter near the stars of the Pleiades and Hyades repeats itself in the eastern twilight sky.
29-31 July. The Delta Aquarid meteor shower peaks. This annual event favors observers in the southern hemisphere and southerly latitudes in the northern hemisphere, though all observers can see some of these slow-moving meteors. The Delta Aquariids appear to radiate from a point near the star Skat (delta Aquarii) in the constellation Aquarius. The shower peaks around July 28-30, but unlike most meteor showers, the Delta Aquarids lack a sharp maximum so meteors are visible from mid-July through early August. The maximum hourly rate can reach 15-20 meteors in a dark sky.

July's Night Sky Notes: A Hero, a Crown, and Possibly a Nova!

By Vivian White

High in the summer sky, the constellation Hercules acts as a centerpiece for late-night stargazers. At the center of Hercules is the "Keystone," a near-perfect square shape between the bright stars Vega and Arcturus that is easy to recognize and can serve as a guidepost for some amazing sights. While not the brightest stars, the shape of the hero's torso, like a smaller Orion, is nearly directly overhead after sunset. Along the edge of this square, you can find a most magnificent jewel - the Great Globular Cluster of Hercules, also known as Messier 13.



Look up after sunset during summer months to find Hercules! Scan between Vega and Arcturus, near the distinct pattern of Corona Borealis. Once you find its stars, use binoculars or a telescope to hunt down the globular clusters M13 (and a smaller globular cluster M92). If you enjoy your views of these globular clusters, you're in luck - look for another great globular, M3, in the nearby constellation of Boötes. Image created with assistance from Stellarium: stellarium.org

Globular clusters are a tight ball of very old stars, closer together than stars near us. These clusters orbit the center of our Milky Way like tight swarms of bees. One of the most famous short stories, Nightfall by Isaac Asimov, imagines a civilization living on a planet within one of these star clusters. They are surrounded by so many stars so near that it is always daytime except for once every millennium, when a special alignment (including a solar eclipse) occurs, plunging their planet into darkness momentarily. The sudden night reveals so many stars that it drives the inhabitants mad.
Back here on our home planet Earth, we are lucky enough to experience skies full of stars, a beautiful Moon, and regular eclipses. On a clear night this summer, take time to look up into the Keystone of Hercules and follow this sky chart to the Great Globular Cluster of Hercules. A pair of binoculars will show a faint, fuzzy patch, while a small telescope will resolve some of the stars in this globular cluster.

A red giant star and white dwarf orbit each other in this animation of a nova similar to T Coronae Borealis. The red giant is a large sphere in shades of red, orange, and white, with the side facing the white dwarf the lightest shades. The white dwarf is hidden in a bright glow of white and yellows, which represent an accretion disk around the star. A stream of material, shown as a diffuse cloud of red, flows from the red giant to the white dwarf. When the red giant moves behind the white dwarf, a nova explosion on the white dwarf ignites, creating a ball of ejected nova material shown in pale orange. After the fog of material clears, a small white spot remains, indicating that the white dwarf has survived the explosion. NASA/Goddard Space Flight Center

Bonus! Between Hercules and the ice-cream-cone-shaped Boötes constellation, you'll find the small constellation Corona Borealis, shaped like the letter "C." Astronomers around the world are watching T Coronae Borealis, also known as the "Blaze Star" in this constellation closely because it is predicted to go nova sometime this summer. There are only 5 known nova stars in the whole galaxy. It is a rare observable event and you can take part in the fun! The Astronomical League has issued a Special Observing Challenge that anyone can participate in. Just make a sketch of the constellation now (you won't be able to see the nova) and then make another sketch once it goes nova.

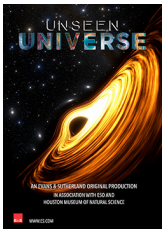
Tune into our mid-month article on the Night Sky Network page, as we prepare for the Perseids! Keep looking up!

Centennial Observatory Upcoming Events
All events are weather permitting.

Event	Place	Date	Time	Admission
Summer Solar Session #7	Centennial Observatory	Wednesday, July 10th, 2024	1:30 to 3:30 PM	FREE
Monthly Free Star Party	Centennial Observatory	Saturday, July 13th, 2024	9:45 to 11:45 PM	FREE
Closest Approach of Pluto in 2024	Centennial Observatory	Wednesday, July 16th, 2024	1:45 to 2:45 AM	FREE
Summer Solar Session #8	Centennial Observatory	Wednesday, July 17th, 2024	1:30 to 3:30 PM	FREE
Summer Solar Session #9	Centennial Observatory	Wednesday, July 24th, 2024	1:30 to 3:30 PM	FREE
Summer Solar Session #10	Centennial Observatory	Wednesday, July 31st, 2024	1:30 to 3:30 PM	FREE

Faulkner Planetarium Shows
For the full schedule and current show times visit!

Now Showing!



You may also visit the Herrett Center Video Vault

Information on passes of the ISS, the USAF's X-37B, the HST, the BlueWalker 3, and other satellites can be found at http://www.heavens-above.com/

Visit https://saberdoesthe...does-the-stars/ for tips on spotting extreme crescent Moons and https://curtrenz.com/moon.html for Full Moon and other lunar data.

Go to https://skyandtelesc...ads/MoonMap.pdf and https://celestron-si...RReeves-web.pdf and https://nightsky.jpl...ObserveMoon.pdf for simple lunar maps. Click on https://astrostrona.pl/moon-map/ for an excellent online lunar map. Visit http://www.ap-i.net/avl/en/start to download the free Virtual Moon Atlas. Consult http://time.unitariu...moon/where.html for current information on the Moon and https://www.fourmila.../lunarform.html for information on various lunar features. See https://svs.gsfc.nasa.gov/4955 a lunar phase and libration calculator and https://svs.gsfc.nasa.gov/5187/ The Lunar Reconnaissance Orbiter Camera (LROC) quick map. https://www.universa...ise-and-sunset/

For more on the planets and how to locate them, browse http://www.nakedeyeplanets.com/

Summaries on the planets for each month can be found at https://earthsky.org/astronomy-essentials/

The graphic at https://www.timeandd...lanets/distance displays the apparent and comparative sizes of the planets, along with their magnitudes and distances, for a given date and time.

The rise and set times and locations of the planets can be determined by clicking on https://www.timeandd...stronomy/night/

Click on https://www.curtrenz.../asteroids.html for information on asteroid occultations taking place this month.

Visit http://cometchasing.skyhound.com/ and http://www.aerith.ne...t/future-n.html and https://cobs.si/ for additional information on comets visible this month.

A list of the closest approaches of comets to the Earth is posted at http://www.cometogra.../nearcomet.html

A wealth of current information on solar system celestial bodies is posted at http://www.curtrenz.com/astronomy.html and http://nineplanets.org/

Information on the celestial events transpiring each week can be found at https://stardate.org/nightsky and http://astronomy.com/skythisweek and http://www.skyandtel...ky-at-a-glance/

Free star maps for any month may be downloaded at http://www.skymaps.com/downloads.html and https://www.telescop...thly-Star-Chart and http://www.kenpress.com/index.html

Data on current supernovae can be found at http://www.rochester...y.org/snimages/

Finder charts for the Messier objects and other deep-sky objects are posted at https://freestarcharts.com/messier and https://freestarcharts.com/ngc-ic and http://www.cambridge..._april-june.htm

Telrad finder charts for the Messier Catalog are posted at http://www.custerobs...cs/messier2.pdf and http://www.star-shin...ssierTelrad.htm

Telrad finder charts for the SAC's 110 Best of the NGC are available at https://www.saguaroa...k110BestNGC.pdf

Information pertaining to observing some of the more prominent Messier galaxies can be found at http://www.cloudynig...ur-astronomers/

Author Phil Harrington offers an excellent freeware planetarium program for binocular observers known as TUBA (Touring the Universe through Binoculars Atlas), which also includes information on purchasing binoculars, at http://www.philharrington.net/tuba.htm

Stellarium and Cartes du Ciel are two excellent freeware planetarium programs that are available at http://stellarium.org/ and https://www.ap-i.net/skychart/en/start

Deep-sky object list generators can be found at http://www.virtualcolony.com/sac/ and https://telescopius.com/ and http://tonightssky.com/MainPage.php

Freeware sky atlases can be downloaded at http://www.deepskywa...-atlas-full.pdf and https://www.cloudyni...ar-charts-r1021 and https://allans-stuff.com/triatlas/

For current sky charts visit the NASA Night Sky Network https://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=699

Magic Valley Astronomical Society
550 Sparks St.
Twin Falls, ID

The Magic Valley Astronomical Society (MVAS) was founded in 1976. The Society is a non-profit [501(c) 3] educational and scientific organization dedicated to bringing together people with an interest in astronomy.

In partnership with the Centennial Observatory, Herrett Center, College of Southern Idaho - Twin Falls; we hold regularly scheduled monthly meetings and observation sessions, at which we share information on current astronomical events, tools and techniques for observation, astrophotography, astronomical computer software, and other topics concerning general astronomy. Members enthusiastically share their telescopes and knowledge of the night sky with all who are interested. In addition to our monthly public star parties we hold members only star parties at various locations throughout the Magic Valley.

MVAS promotes the education of astronomy and the exploration of the night sky along with safe solar observing through our public outreach programs. We provide two types of outreach; public star parties and events open to anyone interested in astronomy, and outreach programs for individual groups and organizations (e.g. schools, churches, scout troops, company events, etc.), setting up at your location. All of our outreach programs are provided by MVAS volunteers at no cost. However, MVAS will gladly accept donations. Donations enable us to continue and improve our public outreach programs.

Membership is not just about personal benefits. Your membership dues support the work that the Magic Valley Astronomical Society does in the community to promote the enjoyment and science of astronomy.
Speakers, public star parties, classes and support for astronomy in schoolrooms, and outreach programs just to name a few of the programs that your membership dues support.

Annual Membership dues will be:
$20.00 for individuals, families, and $10.00 for students.
Contact Treasurer Jim Tubbs for dues information via e-mail: jtubbs015@msn.com

Donations to our club are always welcome and are even tax deductible. Please contact a board member for details.
Lending Telescopes: The society currently has three telescopes for loan and would gladly accept others please contact President Robert Mayer, for more information on these and other benefits.

Telescopes are an individual thing and not practical for public use. However, everyone should have the experience of a good look at the moon for at least 5 minutes in their life time. It is a dimension and feeling that is unexplainable. Pictures or TV can't give this feeling, awareness, or experience of true dimension. A person will not forget seeing our closest neighbor, the moon.

Norman Herrett in a letter to Dr. J. L. Taylor, president of the College of Southern Idaho, Twin Falls, ID, USA.